Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Facilitating the Communications of Earth Stations	)	IB Docket No. 18-315
In Motion with Non-Geostationary Orbit Space	)	
Stations	)	

COMMENTS OF EUTELSAT S.A.

Eutelsat S.A. ("Eutelsat") submits these comments on the Notice of Proposed Rulemaking ("NPRM") to establish a regulatory framework for earth stations in motion ("ESIMs") communicating with non-geostationary satellite orbit ("NGSO") fixed-satellite service ("FSS") systems.[1]

Eutelsat is a global satellite operator with substantial ESIM operations in the United States and around the world, supporting numerous aeronautical and maritime customers. Thus, Eutelsat has generally welcomed the Commission's efforts to streamline and rationalize existing aeronautical, maritime, and land-based satellite mobility rules across multiple frequency bands.[2]

The Commission proposes various changes to its original ESIM rules to accommodate communications with NGSO systems. Should the Commission modify its rules to cover NGSO FSS ESIMs, it should protect GSO operations consistent with the Commission's well-settled licensing policies, and it should ensure that essential monitoring and control requirements are applied to NGSO FSS ESIMs.

---

[1] *See Facilitating the Communications of Earth Stations in Motion with Non-Geostationary Orbit Space Stations*, Notice of Proposed Rulemaking, FCC 18-160, RM 18-315 (rel. Nov. 16, 2018) ("*NPRM*").

[2] *See Amendment of Parts 2 and 25 of the Commission's Rules to Facilitate the Use of Earth Stations in Motion Communicating with Geostationary Orbit Space Stations in Frequency Bands Allocated to the Fixed Satellite Service*, Report and Order and Further Notice of Proposed Rulemaking, FCC 18-138 (rel. Sept. 27, 2018) ("*GSO FSS ESIM Order and Further NPRM*").

First, satellite mobility operations involve additional complexities for NGSO system operators, as continually changing earth station and space station locations raise complex interference avoidance and license compliance issues. These additional issues should be fully accounted for in NGSO satellite system applications and ESIM blanket license applications, particularly in equivalent power flux density ("EPFD") compliance and ESIM monitoring/ control demonstrations. The Commission also should ensure protection of GSO operations through appropriate conditions in NGSO FSS satellite system licenses and NGSO FSS ESIM blanket licenses.

The Commission should continue authorizing ESIM operations consistent with the regulatory status of the allocated service, including first-in-time protection for pre-existing, co-primary GSO operations and priority for operations with primary regulatory status as compared to secondary operations. This will enhance regulatory certainty for GSO and NGSO satellite system operators, as well as GSO and NGSO FSS ESIM operators and service providers, and will facilitate continued expansion of satellite communications services.

Second, the FCC appears to suggest elimination of self-monitoring and network control and monitoring center requirements for NGSO FSS ESIMs. Specifically, the *NPRM* proposes to limit rules containing references to EIRP spectral density limits to GSO ESIMs, but these provisions also include important terminal monitoring and network control requirements that presumably should apply to all ESIMs – GSO and NGSO alike.[3] The Commission's original

[3] *Compare* NPRM at ¶18 (noting two-degree spacing provisions as applicable to GSO FSS ESIMs only) *with* ¶19 (suggesting §25.228(b) and (c) include only two-degree spacing provisions while they also contain self-monitoring and network monitoring and control or "NCMC" requirements).

ESIM order made clear that these requirements were intended for all ESIMs.[4] Eutelsat believes that this potentially unintended modification can be adequately addressed by:

- retaining the Commission's proposal to limit Section 25.228(a) to GSO FSS ESIMs but including the term "off-axis" to underscore this provision's applicability to GSO FSS ESIMs only; and
- removing the Commission's proposed GSO FSS limitation and the term "off-axis" in Sections 25.228(b) and 25.228(c) so as not to restrict "authorized….EIRP density limits" to GSO FSS ESIMs only.

These changes would broaden the applicability of Sections 25.228(b) and 25.228(c) to GSO and NGSO FSS ESIMs because each Commission earth station license contains maximum EIRP spectral density limits to which the provisions may refer (in addition to off-axis EIRP spectral density limits applicable to GSO FSS ESIMs only). In this way, the Commission can ensure that GSO and NGSO FSS ESIM operators comply with the same general monitoring and control requirements.

These important self-monitoring and network control requirements are essential to ensuring all ESIM operations can be conducted in accordance with the Commission's rules without causing interference to other systems and services. There is no basis to treat GSO and NGSO FSS ESIMs differently with respect to these important requirements, and the Commission should ensure that they are applied equally to all ESIM operations.

In conclusion, if the Commission modifies its ESIM rules to facilitate communication with NGSO FSS systems, Eutelsat urges it to ensure protection of incumbent GSO operations

[4] *See GSO FSS ESIM Order and Further NPRM* at ¶¶ 25 (NCMC requirement) and 29 (self-monitoring requirement).

through appropriate application demonstrations and license conditions, and to preserve essential self-monitoring and network control requirements for NGSO FSS ESIM operations.

Respectfully submitted,

EUTELSAT S.A.

Fabrice Barbedette
Director of Regulatory Market Access
Eutelsat S.A.
70, rue Balard
F-75502 Paris Cedex 15
France

Carlos M. Nalda
LMI Advisors, LLC
2550 M Street, NW, Suite 345
Washington, D.C. 20037

On behalf of Eutelsat S.A.

February 11, 2019